

[Web](#) [Images](#) [Groups](#) <sup>New!</sup> [News](#) [Froogle](#) [more »](#)

[disabling resource reservation](#)

[Advanced Search](#)

[Preferences](#)

[Language Tools](#)

[Google Search](#)

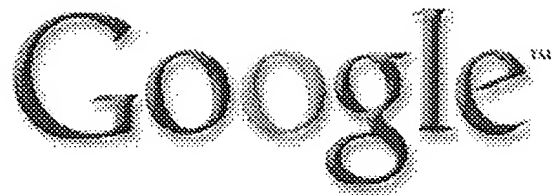
[I'm Feeling Lucky](#)

[Ways to help with tsunami relief](#)

[Advertising Programs](#) - [Business Solutions](#) - [About Google](#)

[Make Google Your Homepage!](#)

©2005 Google - Searching 8,058,044,651 web pages



[Web](#) [Images](#) [Groups](#) <sup>New!</sup> [News](#) [Froogle](#) [more »](#)

disabling rsvp

[Advanced Search](#)

[Preferences](#)

[Language Tools](#)

Google Search

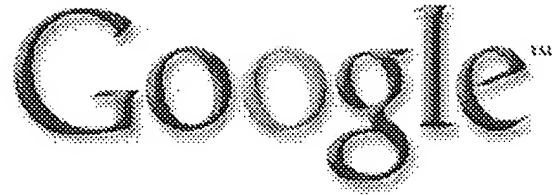
I'm Feeling Lucky

[Ways to help with tsunami relief](#)

[Advertising Programs](#) - [Business Solutions](#) - [About Google](#)

[Make Google Your Homepage!](#)

©2005 Google - Searching 8,058,044,651 web pages



[Web](#) [Images](#) [Groups](#) <sup>New!</sup> [News](#) [Froogle](#) [more »](#)

[disable rsvp](#)

[Advanced Search](#)

[Preferences](#)

[Language Tools](#)

[Google Search](#)

[I'm Feeling Lucky](#)

[Ways to help with tsunami relief](#)

[Advertising Programs](#) - [Business Solutions](#) - [About Google](#)

[Make Google Your Homepage!](#)

©2005 Google - Searching 8,058,044,651 web pages


[Subscribe \(Full Service\)](#) [Register \(Free, Limited Service\)](#) [Login](#)

 Search: ☒ The ACM Digital Library ☐ The Guide



## THE ACM DIGITAL LIBRARY

Full text of every article ever published by ACM.

- [Using the ACM Digital Library](#)
- [Frequently Asked Questions \(FAQ's\)](#)

### Recently loaded issues and proceedings:

(available in the DL within the past 2 weeks)

Journal of the ACM (JACM)  
Volume 51 Issue 6

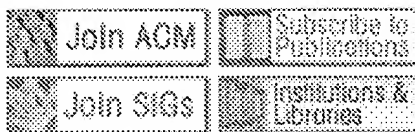
ACM Transactions on Asian Language Information  
Processing (TALIP)  
Volume 3 Issue 4

ACM Transactions on Mathematical Software (TOMS)  
Volume 30 Issue 4

Communications of the ACM  
Volume 48 Issue 1

### Feedback

- [Report a problem](#)
- [Take our Satisfaction survey](#)



### • [Advanced Search](#)

### • [Browse the Digital Library:](#)

- [Journals](#)
- [Magazines](#)
- [Transactions](#)
- [Proceedings](#)
- [Newsletters](#)
- [Publications by Affiliated Organizations](#)
- [Special Interest Groups \(SIGs\)](#)

### Personalized Services: [Login required](#)

#### [My Binders](#)

Save search results and queries. Share binders with colleagues and build bibliographies.

#### [TOC Service](#)

Receive the table of contents via email as new issues or proceedings become available.



CrossRef Search  
Pilot program to create full-text interpublisher searchability.

## Computing Reviews

Access [critical reviews](#) of computing literature.

## THE GUIDE TO COMPUTING LITERATURE

**Bibliographic collection** from major publishers in computing.  
[Go to The Guide](#)

The ACM Portal is published by the Association for Computing Machinery. Copyright © 2005 ACM, Inc.

[Terms of Usage](#) [Privacy Policy](#) [Code of Ethics](#) [Contact Us](#)


[Subscribe \(Full Service\)](#) [Register \(Free, Limited Service\)](#) [Login](#)

 Search:  The ACM Digital Library  The Guide

 disabling near10 resource near reservation


## THE ACM DIGITAL LIBRARY

Full text of every article ever published by ACM.

- [Using the ACM Digital Library](#)
- [Frequently Asked Questions \(FAQ's\)](#)

### Recently loaded issues and proceedings:

(available in the DL within the past 2 weeks)

Journal of the ACM (JACM)  
Volume 51 Issue 6

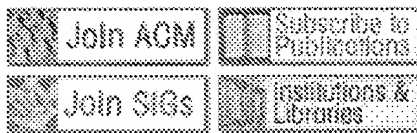
ACM Transactions on Asian Language Information  
Processing (TALIP)  
Volume 3 Issue 4

ACM Transactions on Mathematical Software (TOMS)  
Volume 30 Issue 4

Communications of the ACM  
Volume 48 Issue 1

### Feedback

- [Report a problem](#)
- [Take our Satisfaction survey](#)



### • [Advanced Search](#)

### • [Browse the Digital Library:](#)

- [Journals](#)
- [Magazines](#)
- [Transactions](#)
- [Proceedings](#)
- [Newsletters](#)
- [Publications by Affiliated Organizations](#)
- [Special Interest Groups \(SIGs\)](#)

### Personalized Services: [Login required](#)

#### [My Binders](#)

Save search results and queries. Share binders with colleagues and build bibliographies.

#### [TOC Service](#)

Receive the table of contents via email as new issues or proceedings become available.



[CrossRef Search](#)  
Pilot program to create full-text interpublisher searchability.

### Computing Reviews

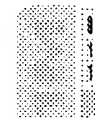
Access [critical reviews](#) of computing literature.

## THE GUIDE TO COMPUTING LITERATURE

**Bibliographic collection** from major publishers in computing.  
[Go to The Guide](#)

The ACM Portal is published by the Association for Computing Machinery. Copyright © 2005 ACM, Inc.

[Terms of Usage](#) [Privacy Policy](#) [Code of Ethics](#) [Contact Us](#)

**IEEE Xplore<sup>®</sup>**  
RELEASE 1.0Welcome  
United States Patent and Trademark Office

&gt;&gt; See

[Help](#) | [FAQ](#) | [Terms](#) | [IEEE Peer Review](#) | [Quick Links](#)**Welcome to IEEE Xplore<sup>®</sup>**

- ☐ Home
- ☐ What Can I Access?
- ☐ Log-out

**Tables of Contents**

- ☐ Journals & Magazines
- ☐ Conference Proceedings
- ☐ Standards

**Search**

- ☐ By Author
- ☐ Basic
- ☐ Advanced
- ☐ CrossRef

**Member Services**

- ☐ Join IEEE
- ☐ Establish IEEE Web Account
- ☐ Access the IEEE Member Digital Library

**IEEE Enterprise**

- ☐ Access the IEEE Enterprise File Cabinet

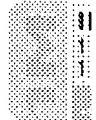
[Print Format](#)Your search matched **0** of **1108362** documents.A maximum of **500** results are displayed, **15** to a page, sorted by **Relevance Descending** order.**Refine This Search:**

You may refine your search by editing the current search expression or entering a new one in the text box.

☐ Check to search within this result set**Results Key:****JNL** = Journal or Magazine   **CNF** = Conference   **STD** = Standard**Results:****No documents matched your query.**

[Home](#) | [Log-out](#) | [Journals](#) | [Conference Proceedings](#) | [Standards](#) | [Search by Author](#) | [Basic Search](#) | [Advanced Search](#) | [Join IEEE](#) | [Web Account](#) | [New this week](#) | [OPAC Linking Information](#) | [Your Feedback](#) | [Technical Support](#) | [Email Alerting](#) | [No Robots Please](#) | [Release Notes](#) | [IEEE Online Publications](#) | [Help](#) | [FAQ](#) | [Terms](#) | [Back to Top](#)

Copyright © 2004 IEEE — All rights reserved

**IEEE Xplore®**  
RELEASE 1.5Welcome  
United States Patent and Trademark Office

&gt;&gt; See

[Help](#) | [FAQ](#) | [Terms](#) | [IEEE Peer Review](#) | [Quick Links](#)**Welcome to IEEE Xplore**

- ☐ Home
- ☐ What Can I Access?
- ☐ Log-out

**Tables of Contents**

- ☐ Journals & Magazines
- ☐ Conference Proceedings
- ☐ Standards

**Search**

- ☐ By Author
- ☐ Basic
- ☐ Advanced
- ☐ CrossRef

**Member Services**

- ☐ Join IEEE
- ☐ Establish IEEE Web Account
- ☐ Access the IEEE Member Digital Library

**IEEE Enterprise**

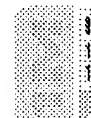
- ☐ Access the IEEE Enterprise File Cabinet

[Print Format](#)Your search matched **0** of **1108362** documents.A maximum of **500** results are displayed, **15** to a page, sorted by **Relevance Descending** order.**Refine This Search:**

You may refine your search by editing the current search expression or entering new one in the text box.

☐ Check to search within this result set**Results Key:****JNL** = Journal or Magazine   **CNF** = Conference   **STD** = Standard**Results:****No documents matched your query.**[Home](#) | [Log-out](#) | [Journals](#) | [Conference Proceedings](#) | [Standards](#) | [Search by Author](#) | [Basic Search](#) | [Advanced Search](#) | [Join IEEE](#) | [Web Account](#) | [New this week](#) | [OPAC Linking Information](#) | [Your Feedback](#) | [Technical Support](#) | [Email Alerting](#) | [No Robots Please](#) | [Release Notes](#) | [IEEE Online Publications](#) | [Help](#) | [FAQ](#) | [Terms](#) | [Back to Top](#)

Copyright © 2004 IEEE — All rights reserved

**IEEE Xplore<sup>®</sup>**  
RELEASE 1.2Welcome  
United States Patent and Trademark Office

» See

[Help](#) | [FAQ](#) | [Terms](#) | [IEEE Peer Review](#) | [Quick Links](#)**Welcome to IEEE Xplore<sup>®</sup>**

- ☐ Home
- ☐ What Can I Access?
- ☐ Log-out

**Tables of Contents**

- ☐ Journals & Magazines
- ☐ Conference Proceedings
- ☐ Standards

**Search**

- ☐ By Author
- ☐ Basic
- ☐ Advanced
- ☐ CrossRef

**Member Services**

- ☐ Join IEEE
- ☐ Establish IEEE Web Account
- ☐ Access the IEEE Member Digital Library

**IEEE Enterprise**

- ☐ Access the IEEE Enterprise File Cabinet

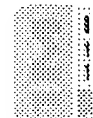
[Print Format](#)Your search matched **0** of **1108362** documents.A maximum of **500** results are displayed, **15** to a page, sorted by **Relevance Descending** order.**Refine This Search:**

You may refine your search by editing the current search expression or entering a new one in the text box.

☐ Check to search within this result set**Results Key:****JNL** = Journal or Magazine   **CNF** = Conference   **STD** = Standard**Results:****No documents matched your query.**

[Home](#) | [Log-out](#) | [Journals](#) | [Conference Proceedings](#) | [Standards](#) | [Search by Author](#) | [Basic Search](#) | [Advanced Search](#) | [Join IEEE](#) | [Web Account](#) | [New this week](#) | [OPAC Linking Information](#) | [Your Feedback](#) | [Technical Support](#) | [Email Alerting](#) | [No Robots Please](#) | [Release Notes](#) | [IEEE Online Publications](#) | [Help](#) | [FAQ](#) | [Terms](#) | [Back to Top](#)

Copyright © 2004 IEEE — All rights reserved

**Welcome to IEEE Xplore**

- ☐ Home
- ☐ What Can I Access?
- ☐ Log-out

**Tables of Contents**

- ☐ Journals & Magazines
- ☐ Conference Proceedings
- ☐ Standards

**Search**

- ☐ By Author
- ☐ Basic
- ☐ Advanced
- ☐ CrossRef

**Member Services**

- ☐ Join IEEE
- ☐ Establish IEEE Web Account
- ☐ Access the IEEE Member Digital Library

**IEEE Enterprise**

- ☐ Access the IEEE Enterprise File Cabinet



Your search matched **0** of **1108362** documents.

A maximum of **500** results are displayed, **15** to a page, sorted by **Relevance Descending** order.

**Refine This Search:**

You may refine your search by editing the current search expression or entering a new one in the text box.

☐ Check to search within this result set

**Results Key:**

**JNL** = Journal or Magazine   **CNF** = Conference   **STD** = Standard

**Results:**

**No documents matched your query.**

**Welcome to IEEE Xplore**

- ☐ Home
- ☐ What Can I Access?
- ☐ Log-out

**Tables of Contents**

- ☐ Journals & Magazines
- ☐ Conference Proceedings
- ☐ Standards

**Search**

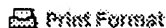
- ☐ By Author
- ☐ Basic
- ☐ Advanced
- ☐ CrossRef

**Member Services**

- ☐ Join IEEE
- ☐ Establish IEEE Web Account
- ☐ Access the IEEE Member Digital Library

**IEEE Enterprise**

- ☐ Access the IEEE Enterprise File Cabinet



Your search matched **0** of **1108362** documents.

A maximum of **500** results are displayed, **15** to a page, sorted by **Relevance Descending** order.

**Refine This Search:**

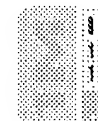
You may refine your search by editing the current search expression or entering a new one in the text box.

☐ Check to search within this result set**Results Key:**

**JNL** = Journal or Magazine   **CNF** = Conference   **STD** = Standard

**Results:**

**No documents matched your query.**

**Welcome to IEEE Xplore<sup>®</sup>**

- ☐ Home
- ☐ What Can I Access?
- ☐ Log-out

**Tables of Contents**

- ☐ Journals & Magazines
- ☐ Conference Proceedings
- ☐ Standards

**Search**

- ☐ By Author
- ☐ Basic
- ☐ Advanced
- ☐ CrossRef

**Member Services**

- ☐ Join IEEE
- ☐ Establish IEEE Web Account
- ☐ Access the IEEE Member Digital Library

**IEEE Enterprise**

- ☐ Access the IEEE Enterprise File Cabinet



Your search matched **0** of **1108362** documents.

A maximum of **500** results are displayed, **15** to a page, sorted by **Relevance Descending** order.

**Refine This Search:**

You may refine your search by editing the current search expression or entering new one in the text box.

☐ Check to search within this result set

**Results Key:**

**JNL** = Journal or Magazine   **CNF** = Conference   **STD** = Standard

**Results:**

**No documents matched your query.**